

response uses Kassatly in place of Windrem for the rejection of claims 4-5 and 14-15.

Information Disclosure Statement

In the IDS submitted March 9, 1998 (the PTO-1449 of which was received with the previous Office Action), the Examiner neglected to note consideration of the Other Documents AD-AG. It is respectfully requested that the Examiner note consideration of these documents and forward an updated photocopy of the PTO-1449. If the Examiner is unable to locate the copies of such documents that were filed with the IDS, the Examiner is respectfully requested to contact applicant's undersigned attorney via telephone.

This request is repeated from the response filed January 7, 1999.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejects claims 1, 7, 10-11 and 17-18 under 35 U.S.C. § 102(e) as being anticipated by Kassatly, U.S. Patent No. 5,790,177.

Regarding claim 1, the Examiner states that Kassatly discloses in Figs. 1, 2 and 3 a digital video tape recorder apparatus and method in which video channels are simultaneously recorded in a recording mode, comprising: (a) the recited receiving means for receiving a data stream in which a plurality of audio data and video data or one of the same are multiplexed in a predetermined order (see the reception process 14 for receiving and processing signals received from the transmitter 12; and col. 18, line 66 through col. 19, line 35); (b) the recited multiplexing/demultiplexing means (see multiplexer 25 and demultiplexer 30; and col. 19, line 36 through col. 20, line 34); and (c) the recited plurality of

recording/reproducing means (see channel 1 to channel n storage means 35-39, respectively; and col. 19, lines 49-55).

Regarding claims 7 and 10-11, the Examiner states the features of these are accommodated in the discussion of claim 1.

Regarding claim 17, the Examiner states the features of this are accommodated in the discussion of claim 7.

Regarding claim 18, the Examiner states the features of this are accommodated in the discussion of claim 1.

In response, the rejection is respectfully traversed. A rejection under § 102 requires the reference to teach each and every claim element. See MPEP § 2131. It is respectfully submitted that Kassatly fails to so teach.

Each claim 1, 7 and 11 recites reproducing each recorded channel and multiplexing the reproduced channels. On the other hand, Kassatly, as understood, teaches the selection of only one channel. See element 50 of FIG. 1; and col. 19, lines 55-63. Thus, only one of Kassatly's n channels is reproduced, and a multiplexing operation on that one reproduced channel would be wasteful. In fact, Kassatly teaches that the multiplexing is not performed on the one reproduced channel. See element 25 of FIG. 1 (showing multiplexing before demultiplexing and storing, not after). Thus, it is respectfully submitted that Kassatly fails to anticipate applicant's invention as set forth in claims 1, 7 and 11, and that these claims are therefore allowable.

Furthermore, claim 11 recites disk drives. On the other hand, Kassatly, as understood, teaches "storage" or "memory storage". See FIG. 8, elements 230, 232 and 234; and the specification at col. 20, line 56; col. 21, line 59; and col. 24, line 41. It is respectfully submitted that "storage" and "memory storage" do not teach disk

drives. Thus, it is respectfully submitted that the rejection under § 102 is improper.

It is respectfully submitted that claims 10 and 17-18 are allowable as claims dependent from claims 1, 11 and 7, respectively, allowable as argued above.

Claim Rejections under 35 U.S.C. § 103

The Examiner rejects claims 2-3, 8-9 and 12-13 under 35 U.S.C. § 103 as being unpatentable over Kassatly in view of Windrem et al., U.S. Patent No. 5,754,730 (hereinafter Windrem).

The Examiner rejects claims 4-5 and 14-15 under 35 U.S.C. § 103 as being unpatentable over Kassatly in view of Nakayama et al., U.S. Patent No. 4,947,271 (hereinafter Nakayama).

The Examiner rejects claims 6 and 16 under 35 U.S.C. § 103 as being unpatentable over Kassatly in view of Nakayama and further in view of Windrem.

Claim 2

The Examiner concedes that Kassatly fails to disclose wherein each of the plurality of recording means adopts a mirror configuration having a plurality of recording apparatuses for recording the same audio and/or video data. The Examiner states that Windrem teaches a digital video recording system employing standard hard disk arrays wherein redundancy is provided through a redundant data controller 99 to handle possible failure of one drive in the array (col. 2, lines 28-40). The Examiner concludes that it would have been obvious to modify Kassatly by realizing Kassatly with the Windrem redundancy system wherein redundancy is provided through a redundant data controller 99 to handle possible failure of one drive in the array.

In response, the rejection is respectfully traversed. One requirement of *prima facie* obviousness under § 103 is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. See MPEP § 2143. It is respectfully submitted that the Examiner has failed to provide a sufficient motivation to combine Kassatly and Windrem.

The Examiner has provided a motivation "to handle possible failure of one drive in the array". However, Kassatly teaches "storage" or "memory storage". See FIG. 8, elements 230, 232 and 234; and the specification at col. 20, line 56; col. 21, line 59; and col. 24, line 41. Kassatly fails to teach any drives. The motivation must be logically related to the references combined. Thus, a motivation to overcome drive failures cannot support a motivation to combine Kassatly and Windrem.

Furthermore, the Examiner has failed to point out any teaching in Kassatly, Windrem, or the knowledge generally available to one of ordinary skill in the art at the time of the invention that there are any "storage" or "memory storage" failures that need to be overcome.

Therefore, it is respectfully submitted that the Examiner has failed to make a *prima facie* showing of obviousness, and that claim 2 is allowable over Kassatly in view of Windrem.

Claim 3.

The Examiner states that Windrem further discloses wherein each of said plurality of recording means adopts an array configuration in which a plurality of recording apparatuses are connected in parallel. The Examiner further states that Windrem teaches in Fig. 1 a disk array 12 comprising an array of disk drives

wherein the array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data (see Fig. 1; disk array 12; col. 1, lines 15-32; and col. 3, lines 31-52). The Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify Kassatly by adding the disk array of Windrem to Kassatly since an array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data.

In response, the rejection is respectfully traversed. The fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness. See MPEP § 2143.01. It is respectfully submitted that the Examiner has merely provided a statement of operability.

The Examiner has given a motivation to add a disk array "since an array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data". However, the Examiner has not pointed to a deficiency in Kassatly that would be cured by such an addition. The reason this element of the *prima facie* case is called the "motivation to combine" is that there must be some missing element or function that calls out for the combination or modification. Otherwise it would appear that the Examiner is merely using the claims as a template. Thus, it is respectfully submitted that the Examiner has failed to make a *prima facie* showing of obviousness, and that claim 3 is allowable over Kassatly in view of Windrem.

Claims 8-9 and 12-13

Regarding claim 8, the Examiner states that Windrem discloses wherein the demultiplexed each one is duplicated on more

than one recording medium to perform backup of the demultiplexed each one (see redundant data controller 99; and col. 2, lines 28-40).

In response, the rejection is respectfully traversed. One requirement of *prima facie* obviousness under § 103 is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. See MPEP § 2143.

The Examiner has totally failed to provide any motivation to combine Kassatly and Windrem. The Examiner has merely provided a statement that the claim elements are met. It is respectfully submitted that the Examiner has failed to make a *prima facie* showing of obviousness, and that claim 8 is allowable over Kassatly in view of Windrem.

Regarding claims 9 and 12-13, the Examiner states that the claimed features are accommodated in the above discussions of claims 3, 2 and 3, respectively.

In response, the rejections are respectfully traversed. It is respectfully submitted that claims 9 and 12-13 are allowable for the same reasons given above regarding claims 3, 2 and 3, respectively.

Claim 4

The Examiner concedes that Kassatly fails to explicitly disclose wherein control data is multiplexed on the data stream, the demultiplexing means demultiplexes the control data multiplexed on the data stream, and provision is made for controlling a recording operation of the recording means and reproduction operation of the reproducing means based on the demultiplexed control data. The Examiner states that Nakayama teaches in Fig. 7 a recording/reproducing means that in the recording process

multiplexes recorded data signals to which ID data (control data) has been added. The Examiner further states that in the reproduction process, these multiplexed data signals are later reproduced, demultiplexed and the ID data extracted (see col. 7, line 34 to col. 10, line 19). The Examiner also states that it is desirable to record data signals with their respective control data (e.g., ID data), and then multiplex the data signals with the control data in order to facilitate the recovery of the data signals during the reproduction process when the data signals are demultiplexed. The Examiner still further states that to make these processes efficient there is inherently a control means that controls, based on the control data, the recording/reproduction of the data signals. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kassatly by realizing Kassatly with a means to add control data to data signals, during the recording process, before multiplexing, as taught by Nakayama, in order to facilitate the recovery of the data signal, during the reproduction process when the data signals are reproduced and demultiplexed. The Examiner also concludes that it would have been obvious to realize Windrem with a control means in order to make these controlled recording/reproduction processes efficient.

In response, the rejection is respectfully traversed. The Examiner has stated that Nakayama teaches "add[ing] control data to data signals, during the recording process, before multiplexing . . . to facilitate the recovery of the data signal, during the reproduction process when the data signals are . . . demultiplexed". However, claim 4 recites that the input data stream includes multiplexed control data. Claim 1 recites that the input data is demultiplexed, recorded, reproduced, and multiplexed. Thus, claims 1 and 4 set

forth that the control data is demultiplexed before the recording process, not added during the recording process as given by the Examiner's asserted teaching of Nakayama. (In addition, it is respectfully questioned how in Nakayama the control data can control the recording means when it is not added until the recording process is under way, as asserted by the Examiner.) Furthermore, claims 1 and 4 set forth that the recorded data is reproduced before the multiplexing process, not that the data is demultiplexed during the reproduction process as given by the Examiner's asserted teaching of Nakayama. Thus, it is respectfully submitted that the Examiner's asserted teaching of Kassatly in view of Nakayama fails to teach or suggest all the claim elements.

Claims 5 and 14-15

Regarding claim 5, the Examiner states that Nakayama teaches wherein at least one of the plurality of recording means and the reproducing means further performs operation in synchronization with a synchronization signal of the data stream (see Fig. 6; and col. 3, lines 8-37).

Regarding claims 14-15, the Examiner states that the features of these claims are accommodated in the above discussions of claims 4-5, respectively.

In response, the rejection is respectfully traversed. Claim 5 recites that the synchronization signal is of the received input data stream. In response, the Examiner cites Nakayama's Figure 6 and col. 3, lines 8-37. However, Figure 6 merely teaches that the recorded data has a SYNC column. See col. 3, lines 29-31. This teaching fails to set forth any relationship between SYNC and the received input data stream. Furthermore, this teaching fails to set forth how the recording and reproducing means operate in

synchronization with the synchronization signal. Thus, it is respectfully submitted that the Examiner's asserted teaching of Kassatly in view of Nakayama fails to teach or suggest all the elements of claim 5.

It is respectfully submitted that claims 14-15 are allowable for the same reasons as given above regarding claims 4-5, respectively.

Claims 6 and 16

Regarding claim 6, the Examiner concedes that Kassatly and Nakayama fail to disclose a plurality of audio and/or video data recording and reproducing apparatuses being connected in parallel, and wherein the input data stream and the output data stream are input and output among the plurality of audio and/or video data recording and reproducing apparatuses. The Examiner further states that Windrem teaches in Fig. 1 a disk array 12 comprising an array of disk drives which provide sufficient bandwidth to record or play digitized video signals, allowing random access to video data (see Fig. 1; disk array 12; col. 1, lines 15-32; and col. 3, lines 31-52). The Examiner concludes that it would have been obvious to one of ordinary skill in the art to modify Kassatly by adding the disk array of Windrem to Kassatly since an array of disk drives provides sufficient bandwidth to record or play digitized video signals, allowing random access to video data.

Regarding claim 16, the Examiner states that the features of claim 16 are accommodated in the discussions of claim 6 above.

In response, the rejections are respectfully traversed.

First, the fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness. See MPEP § 2143.01. The Examiner has given a motivation to add a disk array "since an array of disk drives provides sufficient bandwidth to record

or play digitized video signals, allowing random access to video data". However, the Examiner has not pointed to a deficiency in Kassatly and Nakayama that would be cured by such an addition. The reason this element of the *prima facie* case is called the "motivation to combine" is that there must be some missing element or function that calls out for the combination or modification. Otherwise it would appear that the Examiner is merely using the claims as a template. Thus, it is respectfully submitted that the Examiner has failed to make a *prima facie* showing of obviousness.

Second, it is respectfully submitted that the proposed combination fails to teach or suggest all the claim elements. Claim 6 recites "a plurality of audio and/or video data recording and reproducing apparatuses". An "audio and/or video data recording and reproducing apparatus" comprises a receiving means, a demultiplexing means, a plurality of recording means, a reproducing means, and a multiplexing means. See claim 1. On the other hand, the Examiner has merely asserted that Windrem teaches a disk array. It is respectfully submitted that a disk array is not a plurality of audio and/or video data recording and reproducing apparatuses. Thus, it is respectfully submitted that the Examiner has failed to make a *prima facie* showing of obviousness.

Therefore, it is respectfully submitted that claim 6 is allowable over Kassatly and Nakayama in view of Windrem. It is respectfully submitted that claim 16 is allowable for the same reasons.

Conclusion

In view of the above, it is respectfully submitted that the application is now in condition for allowance. The Examiner's reconsideration and further examination are respectfully requested.

Respectfully submitted,

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